

PUBLICATION NUMBER : 11026847  
PUBLICATION DATE : 29-01-99

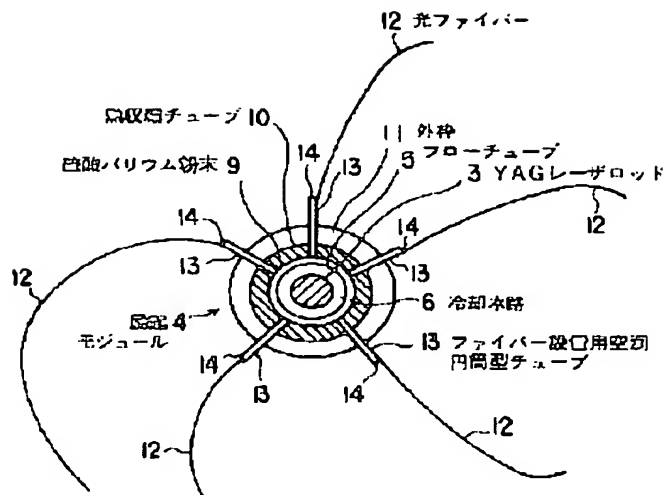
APPLICATION DATE : 07-07-97  
APPLICATION NUMBER : 09181278

APPLICANT : TOSHIBA CORP;

INVENTOR : IMAI SHINICHI;

INT.CL. : H01S 3/094

TITLE : SOLID-STATE LASER DEVICE AND ITS MANUFACTURE



**ABSTRACT :** PROBLEM TO BE SOLVED: To construct a solid-state laser device in such a structure that the exciting efficiency of its solid-state laser medium can be improved and an optical fiber used for emitting excited laser light can be arranged easily by providing a heat-shrinkable tube on the outer peripheral side of a flow tube and a light reflecting material between the flow tube and heat-shrinkable tube.

**SOLUTION:** In the excitation module 4 of a solid-state laser device, a heat-shrinkable tube 10 is provided on the outer peripheral side of a flow tube 5 and filled up with barium sulfate powder 9 and the outer peripheral surface of the flow tube 5 is formed in a reflecting surface for reflecting laser light from a diode. Then tubes 13 which have cylindrical cavities inside for installing optical fibers 12 and are attached to optical fibers 12 are inserted into the module 4 until the tubes 13 come into contact with the outer peripheral surface of the flow tube 5. Since the module 4 is constituted in the above-mentioned way, the module 4 can contribute to the excitation of a YAG laser rod 3 by reflecting the laser light from the diode after the laser light is transmitted through the laser rod 3. Therefore, the exciting efficiency of the laser rod 3 can be improved.

COPYRIGHT: (C)1999,JPO